

### **REMARKS**

In the Office Action mailed on February 6, 2006, claims 1-40 were pending. Claims 1-3, 5-9, 15, 16, 35 and 36 were rejected. Claims 28-34 have been withdrawn. Claims 4, 10-14, 17-24 and 37-40 were objected to. Claims 25-27 were allowed.

Claims 1, 10, 11, 15, 35, 37 and 40 have been amended. The proposed amendments do not contain new matter and support can be found in the originally filed claims, among other places. Applicants respectfully request admission of the amended claims.

Claims 2-4 and 36 have been cancelled and are no longer pending.

#### **I. Rejection under 35 U.S.C. §102 over U.S. Patent No. 4,365,018**

##### **("Crutchfield")**

In the Office Action at page 2, number 3, claims 1-3, 5-9, 15, 16, 35 and 36 were rejected under 35 U.S.C. §102(b) as being anticipated by Crutchfield. Applicants respectfully traverse this rejection.

##### **A. The Present Invention**

The present invention as recited in amended claim 1 is a method of simulating photoactive properties on a surface, comprising: providing a surface; depositing a photoactive coating comprising titania over at least a portion of the substrate to provide the photoactive surface; and applying at least one peroxide-containing material over at least a portion of the surface.

The present invention as recited in amended claim 15 is a method of demonstrating hydrophilicity of a photoactive surface by exposing the surface to electromagnetic radiation having one or more wavelengths of visible light,

comprising: providing a substrate having a photoactive surface comprising titania; and applying at least one peroxide-containing material over at least a portion of the surface.

The present invention as recited in amended claim 35 is an article, comprising: a surface having a photoactive coating comprising titania; and at least one peroxide-containing material deposited over the surface.

#### **B. Crutchfield**

Crutchfield discloses a self-exposing imaging element comprising a support member, a light sensitive layer, and a layer containing reagents which will chemically react in a chemiluminescent reaction to produce light which exposes the light sensitive layer when in contact with an original. The reagents in the light generating layer are physically or chemically segregated prior to exposure to prevent reaction, for example, by encapsulation of one of the reactants, the reaction solvent, or a catalyst. A copy is made by placing a self-exposing imaging element in contact with an original, activating the light sensitive layer by causing the reactants to mix or introducing the reaction solvent or catalyst and using the radiant energy generated to produce an image of the original in the light sensitive layer by reflex imaging or direct transmission imaging.

#### **C. Traversal of the Rejection**

For a proper rejection under §102, the cited art reference must disclose each and every element of the claimed invention. The present invention as recited in amended claim 1 is a method of simulating photoactive properties on a

surface, depositing a photoactive coating comprising titania over at least a portion of the substrate.

In the Office Action at page 4, number 5, the Examiner stated that neither Crutchfield nor Takimoto teaches or suggests photoactive surfaces comprising titania as recited in claims 4, 24 and 40 so those claims would be allowable if rewritten in independent form including all of the limitations of the base claim and intervening claims. As amended, claim 1 requires the photoactive surface to include titania. Such is not disclosed by Crutchfield. As a result, Crutchfield does not disclose each and every limitation as recited in claim 1, and claim 1 is not anticipated by the cited reference. Applicants respectfully request the withdrawal of this rejection.

Claims 5-9 depend from claim 1 and recites the invention in varying scope. Applicants have discussed earlier how amended claim 1 is not anticipated by Crutchfield, and claims 5-9 are similarly not anticipated by the reference. More specifically, Crutchfield does not anticipate depositing a photoactive coating comprising titania over at least a portion of the substrate as recited in claim 1 as further limited by claims 5-9. As a result, Applicants respectfully request the withdrawal of this rejection of claims 5-9.

The present invention as recited in amended claim 15 is a method of demonstrating hydrophilicity of a photoactive surface by exposing the surface to electromagnetic radiation having one or more wavelengths of visible light, comprising: providing a substrate having a photoactive surface comprising titania. As amended, claim 15 requires the photoactive surface to include titania.

Such is not disclosed by Crutchfield as discussed above. Consequently, Crutchfield does not disclose each and every limitation as recited in claim 15, and claim 15 is not anticipated by the cited reference. Applicants respectfully request the withdrawal of this rejection.

Claim 16 depends from claim 15 and recites the invention in varying scope. Applicants have discussed earlier how amended claim 15 is not anticipated by Crutchfield, and claim 16 is similarly not anticipated by the reference. More specifically, Crutchfield does not anticipate depositing a photoactive coating comprising titania over at least a portion of the substrate as recited in claim 15 as further limited by claims 16. As a result, Applicants respectfully request the withdrawal of this rejection of claim 16.

The present invention as recited in amended claim 35 is an article, comprising: a surface having a photoactive coating comprising titania. As amended, claim 35 requires the photoactive surface to comprise titania. Such is not disclosed by Crutchfield as discussed above. Consequently, Crutchfield does not disclose each and every limitation as recited in claim 35, and claim 35 is not anticipated by the cited reference. Applicants respectfully request the withdrawal of this rejection.

Claim 36 depends from claim 35 and recites the invention in varying scope. Applicants have discussed earlier how amended claim 35 is not anticipated by Crutchfield, and claim 36 is similarly not anticipated by the reference. More specifically, Crutchfield does not anticipate depositing a photoactive coating comprising titania over at least a portion of the substrate as

recited in claim 35 as further limited by claim 36. As a result, Applicants respectfully request the withdrawal of this rejection of claim 36.

## **II. Rejection under 35 U.S.C. §102 over U.S. Patent No. 4,025,340 (“Takimoto”)**

In the Office Action at page 3, number 4, claims 1-3, 5-9, 15, 16, 35 and 36 were rejected under 35 U.S.C. §102(b) as being anticipated by Takimoto. Applicants respectfully traverse this rejection.

### **A. Takimoto**

Takimoto discloses a process for toning an electrophotographic layer comprising a photoconductive powdered material and a resinous binder which comprises adding at least two coloring materials to the layer, the coloring materials being selected from the group consisting of sensitizing dyes and pigments and mixtures thereof and having different fading rates in a succeeding bleaching process, forming a toner image on the electrophotographic layer, and selectively bleaching the sensitizing dyes after developing the layer so that one of the sensitizing dyes is bleached more than the other sensitizing dye or pigment.

### **B. Traversal of the Rejection**

The proper rule for a rejection under section 102 is shown above. The present invention as recited in amended claim 1 is a method of simulating photoactive properties on a surface. As amended, claim 1 requires the photoactive surface to include titania. Such is not disclosed by Takimoto as discussed above. Consequently, Takimoto does not disclose each and every

limitation as recited in claim 1, and claim 1 is not anticipated by the cited reference. Applicants respectfully request the withdrawal of this rejection.

Claims 5-9 depend from claim 1 and recites the invention in varying scope. Applicants have discussed earlier how amended claim 1 is not anticipated by Takimoto, and claims 5-9 are similarly not anticipated by the reference. More specifically, Takimoto does not anticipate depositing a photoactive coating comprising titania over at least a portion of the substrate as recited in claim 1 as further limited by claims 5-9. As a result, Applicants respectfully request the withdrawal of this rejection of claims 5-9.

The present invention as recited in amended claim 15 is a method of demonstrating hydrophilicity of a photoactive surface by exposing the surface to electromagnetic radiation having one or more wavelengths of visible light, comprising: providing a substrate having a photoactive surface comprising titania. As amended, claim 15 requires the photoactive surface to include titania. Such is not disclosed by Takimoto as discussed above. Consequently, Takimoto does not disclose each and every limitation as recited in claim 15, and claim 15 is not anticipated by the cited reference. Applicants respectfully request the withdrawal of this rejection.

Claim 16 depends from claim 15 and recites the invention in varying scope. Applicants have discussed earlier how amended claim 15 is not anticipated by Takimoto, and claim 16 is similarly not anticipated by the reference. More specifically, Takimoto does not anticipate depositing a photoactive coating comprising titania over at least a portion of the substrate as

recited in claim 15 as further limited by claim 16. As a result, Applicants respectfully request the withdrawal of this rejection of claim 16.

The present invention as recited in amended claim 35 is an article, comprising: a surface having a photoactive coating comprising titania. As amended, claim 35 requires the photoactive surface to comprise titania. Such is not disclosed by Takimoto as discussed above. Consequently, Takimoto does not disclose each and every limitation as recited in claim 35, and claim 35 is not anticipated by the cited reference. Applicants respectfully request the withdrawal of this rejection.

Claim 36 depends from claim 35 and recites the invention in varying scope. As discussed above, Takimoto does not disclose depositing a photoactive coating comprising titania over at least a portion of the substrate as recited in claim 35 as further limited by claim 36. As a result, claim 36 is not anticipated by the cited reference, and Applicants respectfully request the withdrawal of this rejection of claim 36.

### III. Claim Objections

In the Office Action, claims 4, 10-14, 17-24 and 37-40 were objected to. Claim 4 was rejected. Claims 10-14 depend on claim 1 which is allowable for the reasons discussed above and are allowable for similar reasons. Claims 17-24 depend on claim 15 which is allowable for the reasons discussed above and are allowable for similar reasons. Claims 37-40 depend on claim 35 which is allowable for the reasons discussed above and are allowable for similar reasons.

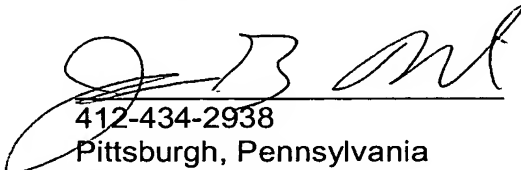
## Conclusions

In light of the amendments and remarks presented in this correspondence, Applicants respectfully request withdrawal of the following rejections: the rejection of claims 1-3, 5-9, 15, 16, 35 and 36 under 35 U.S.C. §102(b) as being anticipated by Crutchfield; the rejection of claims 1-3, 5-9, 15, 16, 35 and 36 under 35 U.S.C. §102(b) as being anticipated by Takimoto; and the allowance of claims 1, 5-24, 35, 36 and 38-40.

If any questions remain about this application, the Examiner is requested to contact Applicants' attorney at the telephone number provided below. Thank you.

Respectfully submitted,

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May 10, 2006